

Saurabh Aggarwal

Software Engineer | AI Engineer

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SUMMARY

Software Engineer at Amazon with 2+ years of experience designing and building high-scale distributed systems and AI-driven risk detection platforms processing 800M+ annual transactions. Proven record of delivering production-grade backend systems with 99.99% availability and measurable business impact in multi-billion-dollar revenue ecosystems.

TECHNICAL SKILLS

Languages & Web Technologies: Java, Python, C/C++, SQL, HTML, CSS, JavaScript, REST APIs, Bash

AI/ML & Data Science: TensorFlow, PyTorch, scikit-learn, NumPy, Pandas, OpenCV, Hugging Face, Matplotlib

PROFESSIONAL EXPERIENCE

Software Engineer, Amazon

Seattle, WA 08/2025 - Present

- Designed and implemented an automated anomaly detection platform to monitor 800M+ annual transactions, safeguarding a \$2.8B revenue segment by proactively identifying financial discrepancies across distributed reward services.
- Led the hands-on execution of service migration from AWS region DUB to ZAZ, maintaining 99.99%+ availability for mission-critical systems.
- Owned production readiness for the Kindle Rewards "Exit Beta" launch, conducting audits, eliminating legacy service dependencies, and supporting roll-out to 1B+ global consumers.
- Remediated accessibility compliance issues (CCR) on Amazon.com by implementing front-end and backend fixes.
- Integrated AI-powered diagnostic tooling to reduce on-call resolution time and improve operational efficiency.
- Initiated internal AI enablement tooling, including a standardized prompt engineering framework, accelerating experimentation and analytics across the team.

Teaching Assistant - Database Concepts, University of Central Florida

Orlando, FL 01/2024 - 05/2025

- Delivered lab instruction and SQL support to 200+ students, improving assignment completion accuracy by 20%
- Developed an automated SQL grading and validation system, reducing manual grading effort by 40% and saving 5+ hours per week.

Software Engineer, Tata Consultancy Services Ltd.

Bangalore, India 10/2020 - 07/2023

- Designed and developed 160+ Kafka-based streaming components for a high-throughput banking platform, ensuring 99.9% data consistency across distributed microservices handling financial transactions at scale.
- Enhanced an AI-driven fraud detection pipeline using Java and Python, improving model accuracy by 15% and significantly reducing false-positive rates for high-value banking transactions.

PROJECTS

Text-Driven 3D Modeling with Multi-View Synthesis and Neural Splatting

- Built a pipeline using SDXL, Zero123++, and Gaussian Splatting to generate realistic 3D models from text prompts
- Optimized inference performance (22s on A100) achieving a 26.76 CLIP score, outperforming DreamFusion and Magic3D in both quality and generation speed.

Face Detection Model Evaluation

- Evaluated accuracy and inference speed of pretrained face detection models across diverse datasets

Few Shot, Label-Free Pill Identification with DiNO

- Improved pill classification accuracy using self-supervised ViT-based DiNO models, reducing dependency on labeled datasets.

EDUCATION

M.S., Computer Vision, University of Central Florida

Orlando, FL 08/2023 - 05/2025

B.Tech, Information Technology, SRM Institute of Science & Technology

Ghaziabad, India 08/2016 - 05/2020